Item ID:	D2934 D2934
Revision ID:	
Item Name:	Saddle Spacer
Start Date: 7/01/13	**Start Qty:** 24.00 *24*
Required Date: 7/05/13	**Req'd Qty:** 24.00 *24*
Reference:	

Accept   *N9000401nn*

Setup	Start	*NS1*
	Stop	*NS2*

Cust Item ID:

Customer:

Approvals: **Process Plan:** MLJ   **Date:** 13-06-27   **Tooling:** _____   **Date:** _____

QC: _____   **Date:** _____   **SPC (Y/N):** _____   **Date:** _____

Run	Start	*NR1*
	Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr D2934	**Revision Nbr** Rev B								
100 *100* Waterjet FLOW CNC Waterjet 6061.080	FLOW WATER JET **Memo** 1-Cut as per Dwg D2934 Dwg Rev: B Prog Rev: B 2- Deburr if necessary	0.00 0.00				24	0		Jm 13-07-21
110 *110* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB **Memo**	0.00 0.00				24	0		Jm 13-07-21
120 *120* QC Quality Control	QC8- Inspect parts - second check **Memo**	0.00 0.00 13-7-22				24			

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____ Date: _____   Work Order update only ☐

| Work Order: _____ | DISPOSITION | AGAINST DEPARTMENT/PROCESS |

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Crosstube	☐	Water Jet	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐
Large Fab	☐	Composite	☐	Supplier	☐
Engineering	☐	Quality	☐	Other	☐

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear

☐	Bending
☐	Centre Not Concentric
☐	Cracks
☐	Crimp/Kink/Ripple/Wave
☐	Cuffs
☐	Crushing
☐	Heat Treat
☐	Inspection Strip in Tube
☐	Marks/Chatter
☐	Turning Sequence
☐	Wave/Twist in Tube

General

☐	Bend
☐	BOM/Route
☐	Broken/Damage/Defect
☐	Burrs
☐	Contamination
☐	Countersink
☐	Cut Too Short
☐	Drawing
☐	Drill Holes
☐	Finish
☐	Fit/Function

☐	Folio/Program
☐	Grain
☐	Hardware
☐	Inspection Incomplete/Unqualified
☐	Instructions Incomplete/Unclear
☐	Misaligned/off center
☐	Mislabeled
☐	Misread
☐	Off-set
☐	Out of Calibration
☐	Out of Sequence

☐	Outside Dimensions
☐	Over/Under tolerance
☐	Part Incorrect
☐	Part Lost/Missing
☐	Part Moved
☐	Positioned Wrong
☐	Power Loss/Surge

☐	Pressure/Forced
☐	Set-up
☐	Temperature/Cure
☐	Weld
☐	Wrong Stock Pulled
☐	Other

_____

_____

_____

		Accept		

Item ID: D2934

Revision ID:

Item Name: Saddle Spacer

Accept   *N9000040100*   Setup Start ***NS1***
Stop ***NS2***

Start Date: 7/01/13   **Start Qty:** 24.00   *24*   **Cust Item ID:**

Required Date: 7/05/13   **Req'd Qty:** 24.00   *24*   **Customer:**

Reference:

Run Start ***NR1***

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1	0.00				24			13·7·23
	Memo	0.00							
140 *140* QC Quality Control	QC3- Inspect Part Finish	0.00				24x			13·7·27
	Memo	0.00							
150 *150* Packaging Packaging	Identify as per dwg & Stock Location: ST022	0.00				24x			13-7-27
	Memo	0.00							

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____ Date: _____　　　　Work Order update only ☐

Work Order: _____	DISPOSITION		AGAINST DEPARTMENT/PROCESS			
Part No. _____	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐	
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	
NCR No. _____	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐		

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear
- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General
- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function

- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence

- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge

- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____
_____
_____

Item ID:	D2934		Accept	*N9000401 00*	Setup	Start	*NS1*
Revision ID:							
Item Name:	Saddle Spacer					Stop	*NS2*
Start Date:	7/01/13	Start Qty: 24.00	*24*				
Required Date:	7/05/13	Req'd Qty: 24.00	*24*	Cust Item ID:			
Reference:				Customer:			

Approvals: Process Plan: _____   Date: _____   Tooling: _____   Date: _____

Run   Start   *NR1*

QC: _____   Date: _____   SPC (Y/N): _____   Date: _____

Stop   *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.00							
Quality Control									

MLS   13-07-26

MLF

13-7-24

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____   Date: _____   Work Order update only ☐

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

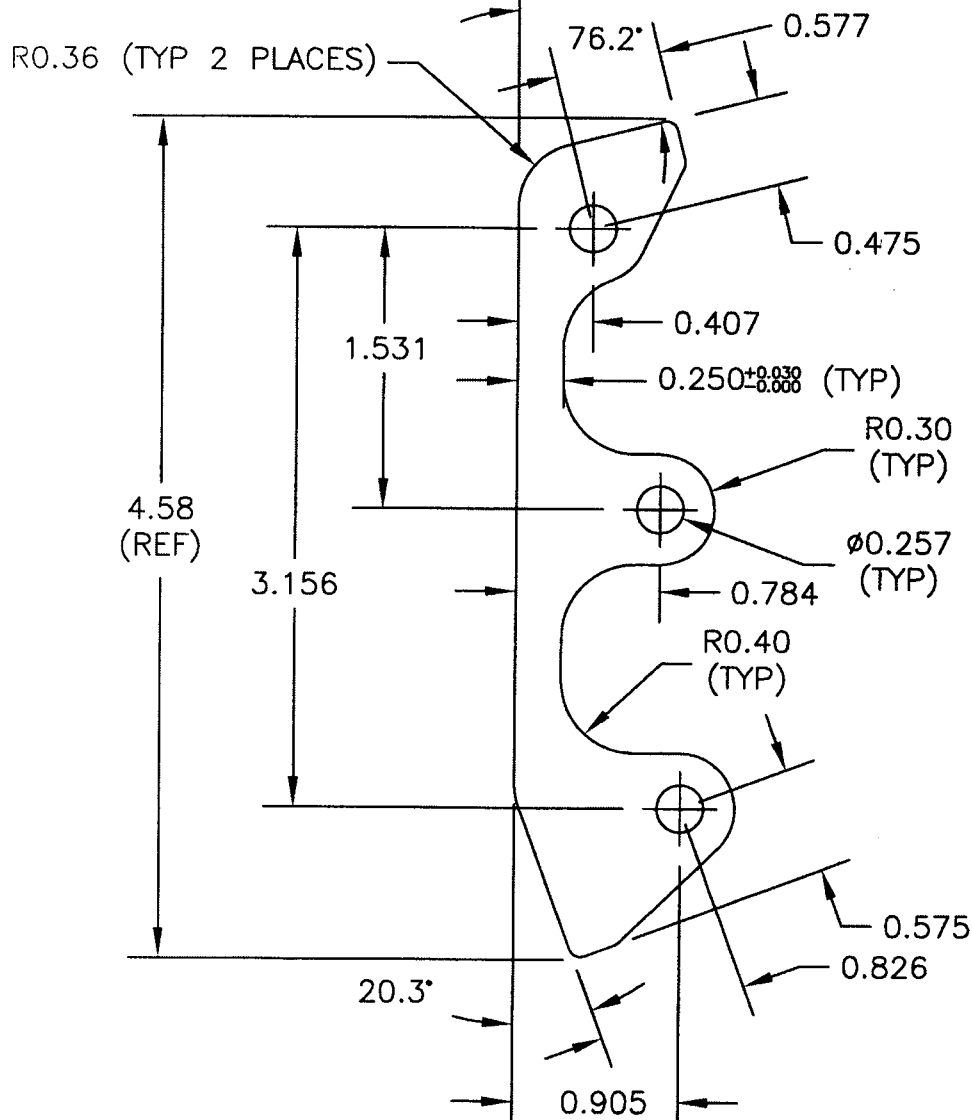|			
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear
☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General
☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

_____
_____
_____

DART AEROSPACE LTD				Work Order:	103443	
Description: Saddle Spacer				Part Number:	D2934	
Inspection Dwg: D2934 Rev: B					Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

[X] **First Article**   [ ] **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.475	+/-0.010	0.477"	–		V	Jkmoi
0.407	+/-0.010	0.405"	–		V	
0.250	+0.030/-0.000	0.265"	–		V	
R0.30	+/-0.030	0.30"	–		RG	
Ø0.257	+0.005/-0.000	0.258"	–		V	
0.784	+/-0.010	0.782"	–		V	
0.826	+/-0.010	0.824"	–		V	
R0.36	+/-0.030	0.36"	–		RG	
0.080	+/-0.010	0.079"	–		V	

Measured by:	Jm	Audited by:		Prototype Approval:	N/A
Date:	13-07-21	Date:	13-7-22	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.08.12	New Issue	KJ/JLM	
B	06.06.23	Dwg Rev. changed	KJ/JLM	
C	08.08.27	0.080 dimension added	KJ/DD	

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.	
~TF~	CB	PORT HADLOCK, WA	
CHECKED	APPROVED	DRAWING NO.	REV. B
PH		D2934	SHEET 1 OF 1
DATE		TITLE	SCALE
06.05.29		SADDLE SPACER	1:1
A	99.11.02	NEW ISSUE	
B	06.05.29	ADD 6061-T6 MATERIAL	

DART

RO.36 (TYP 2 PLACES)

76.2°   0.577

0.475

0.407

$0.250^{+0.030}_{-0.000}$ (TYP)

1.531

RO.30 (TYP)

4.58 (REF)

Ø0.257 (TYP)

0.784

3.156

RO.40 (TYP)

RELEASED
06.06.20

0.575

0.826

20.3°

0.905

WO 103443 MLS
130672

NOTES:
1) MATERIAL: 6061-T6 (PER QQ-A-250/11 OR AMS 4025 OR AMS 4027) 0.080" THICK
   (REF DART SPEC M6061T6S.080)
   OR
   5052-H32/H34 (PER QQ-A-250/8 OR AMS 4016) 0.080" THICK
   (REF DART SPEC M5052H32S.080)
2) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) BREAK ALL SHARP EDGES 0.010 TO 0.020
5) ALL DIMENSIONS ARE IN INCHES